ATTACHMENT 3

PROPOSAL PREPARATION INSTRUCTIONS

ACCELERATED STRATEGIC COMPUTING INITIATIVE

(ASCI)

C6939RFP6-3X

LOS ALAMOS NATIONAL LABORATORY

LOS ALAMOS, NEW MEXICO

PROPOSAL PREPARATION INSTRUCTIONS

A. GENERAL

Proposals shall conform to this section. Failure to follow the instructions regarding the format and content of the proposal may result in the proposal being deemed nonresponsive.

Proposals shall be clearly and concisely written, neat, indexed (cross-indexed as appropriate), and logically assembled.

Unnecessarily elaborate brochures, elaborate art work and expensive presentation aids, or other presentations beyond those sufficient to present a complete proposal are not desired. Legibility, clarity and completeness are much more important.

1. Restrictions on Disclosure and Use of Data

Offerors who include in their proposal data that they do not want disclosed to the public for any purpose or used by the University or Government except for evaluating purposes shall:

(a) Mark the title page with the following legend:
"This proposal includes data that shall not be duplicated, used or disclosed - whole or part - for any purpose other than to evaluate this proposal. If, however, a subcontract is awarded to this offeror as a result of - or in connection with - the submission of this data, the University and the Government shall have the right to duplicate, use or disclose the data to the extend provided in the resulting subcontract. This restriction does not limit the University's or Government's right to use this information contained in the data if it is obtained from another source without restriction. The data subject to this restriction are contained in sheets (insert numbers or other identification of sheets);" and, mark each sheet of data it wishes to restrict with the following legend:

"Use of disclosure of data contained on this sheet is subject to the restriction on the title page of this proposal _____."

2. Proposal Volumes

The proposal shall be submitted in three separate volumes titled and in the quantities shown below. NO PRICE INFORMATION SHALL BE INCLUDED IN THE TECHNICAL AND ADMINISTRATIVE VOLUMES. All volumes shall be contained in 3-ring loose-leaf binders as follows. Binders shall not contain Offeror's pre-printed corporate identification.

VOLUME NO.	VOLUME NAME	NO. OF COPIES
Volume I	Technical Proposal	10

Volume II	Price Proposal	10
Volume III	Administrative Proposal	5

The Offeror shall also submit fifteen (15) 3.25" diskettes containing the Technical Proposal in Microsoft Word 6.0 format. Submit five (5) 3.25" diskettes which contain the Price Proposal in Microsoft Excel 5.0 format. NO PRICE INFORMATION SHALL BE INCLUDED IN THE TECHNICAL PROPOSAL DISKETTES.

All diskettes submitted should be labeled with the Company Name, RFP number and Date.

Submission of your proposal by electronic media (diskette) shall be considered by the University to be a Certification that the diskette is virus free. If a diskette submitted by an Offeror does contain a virus, that Offeror's proposal may be eliminated from further consideration for award.

Should any inconsistencies exist between the Offeror's hardcopy proposal and the documents submitted on diskette, the hardcopy form of the Offeror's proposal shall take precedence.

3. Format

To facilitate evaluation, the format described below shall be followed.

All proposals shall be submitted on 8 1/2 x 11 inch paper, with the exception of illustrations, charts and tables which may be submitted on 11 x 17 sheets. Front and back of each sheet may be used, however, each side must be individually numbered and counted as one page. Font size shall be no smaller than 12 characters per inch and shall be one-and-one-half spaced. The total Technical Proposal Volume shall contain no more than 250 pages, excluding benchmark results, organizational charts and resumes.

The Offeror should submit two (2) copies of the appropriate response to the Benchmark requirements in 8mm UNIX “tar” format.

The Offeror may submit ancillary documentation, such as technical and user manuals, as long as the Offeror points to precise lines and pages in such documentation in his technical response. This material will not fall under the page limits. However, such documentation can be used only as evidence to support a fully self-contained, complete Offeror response in the proposal volumes. Where appropriate in responding to software requirements, Offeror should provide screen dumps illustrating the user interface for software tools.

Offeror's response shall be as complete as possible, providing clear statements and concise delineation with respect to all aspects of this requirement.

Offeror should submit any information or data not requested elsewhere in this document which the Offeror believes may be pertinent to this requirement.

Following receipt of the Offeror's proposal, the University may request that the Offeror provide additional clarifying information and such supplementary information as is sufficient, in the opinion of the University, to assure the University that Offeror's technical competence, business and technical organization, plant facilities, and financial resources are adequate to furnish the equipment and services to completely satisfy this requirement.

B. VOLUME I - TECHNICAL PROPOSAL

1. General

The Technical Proposal should demonstrate that you fully comprehend and intend to meet the performance requirements of the ASCI Blue Statement of Work. It should be clear and concise and must be complete. It shall establish that you have a sound approach to satisfying the requirements and the capabilities and resources required to successfully meet the programmatic goals of the ASCI Blue project. NO PRICE INFORMATION SHALL BE INCLUDED IN THE TECHNICAL PROPOSAL VOLUME.

The Technical Volume shall be tabbed and organized in accordance with the following sections and subsections:

- Executive Summary
- Roadmap to a Sustained Stewardship TeraFLOP System
- Sequential Response to the Statement of Work
- Applications Development Assistance
- Benchmark Results
- Facilities Plan
- Offeror-Proposed Options (if applicable)

2. Executive Summary

The Offeror shall provide an Executive Summary that describes the general philosophy for reaching a sustained TeraFLOP/s on the sPPM hydrodynamics application. Include the general outline of activities, areas of greatest risk, the base technologies to be utilized and the plan for their enhancement. Indicate what other technological developments are being leveraged. Indicate which technologies will be accelerated as a direct result of this subcontract.

3. Roadmap to a Sustained Stewardship TeraFLOP System

The Offeror shall provide sufficient information for the University to asses the viability of the Offeror’s long range product development plans and how they will achieve ASCI goals. Specific areas of interest include, but are not limited to:

- Development Plan
- Hardware Technology Roadmap
- Software Technology Roadmap
- Technology Refresh

- Applications Development

The following sections give a general outline for the Roadmap information. The Offeror is encouraged to think about the very specific activities and their relevance to the business plan of the Offeror and ASCI Blue programmatic goals. While the detailed responses are the discretion and the better judgment of the Offeror, the following general outline shall be followed.

(a) Development Plan

The Offeror shall present a development plan for the execution of development and manufacturing that leads to timely completion of the project goals. The plan shall include the following elements:

- Proposed management team and structure. List the members of the project management team and provide their resumes. Provide an organizational chart with the management team and lines of report to various parts of the corporations. Describe the management and operational structure for the project.

- Proposed project plan and schedule. Provide a work breakdown structure (including milestones) for the project giving at least two levels of detail with projected start and finish dates and interdependencies of deliverables (i.e., Gantt and Pert charts). Indicate critical path items.

- Proposed risk reduction plan. In order to meet the project goals and objectives in a timely manner, indicate fall-back strategies that will become operative should development and manufacturing not proceed as rapidly as predicted. Describe the level of corporate commitment to the project. Indicate additional resources that will be available to the effort in the event that problems develop. Describe the problem escalation and resolution path.

- Qualifications of Offeror. The Offeror should provide a corporate mission statement and business plan. Provide customer contact information for your five largest non-affiliated customer sites. These sites should be currently using the Offeror's equipment. Information for each site should include the type of system, date of delivery, company, and names and telephone numbers of customer points of contact. Describe any previous experience with projects of comparable size and complexity as ASCI Blue.

(b) Hardware Technology Roadmap

The Offeror shall present a roadmap for hardware technology trends that leads to timely completion of the project hardware related goals and illustrates technology projections through the year 2000. In the following questions, the term “capabilities” refers to items from hardware mandatory and target requirements in the Statement of Work. The plan shall include the following elements:

- CPU Performance Road Map. Describe the technology trends for processor development and strategy for leveraging microprocessor technology in building SMPs. Indicate specific performance goals (e.g., target MHz, average instructions/clock issued, SPECfp95, off-chip bandwidth, packaging, transistor count, heat dissipation, packaging, etc.) and time frames with specific milestones. Describe silicon processes that will be utilized. Give detailed architectural descriptions of each processor generation and or refinement. If the strategy is to leverage another vendor's commodity microprocessor, then also describe the business relationship and the nature and extent of the technical collaboration.

- Shared Memory Subsystem Road Map. Describe the plan to develop the shared memory subsystem for SMPs. Describe the memory architecture development effort. Describe the interconnect technology developments to support larger numbers of CPUs within an SMP. Describe the types of commodity RAM components that will be used. Indicate specific performance goals (e.g., target MHz, average latencies, memory bandwidth, packaging, scalability, etc.) and time frames with specific milestones. Describe the performance modeling efforts and how they can be combined with ASCI applications efforts to affect the design. Indicate the way this distributed shared memory scheme has enough bandwidth to support ASCI relevant applications.

- SMP Platform Road Map. Describe the development effort to build larger SMP platforms out of the technology elements described above. What is the development schedule and milestones? What products will be developed? How does this contract affect the product plans? Give architectural descriptions for products developed under this program.

- Cluster Interconnect. Describe the technological development for inter-SMP communications. Indicate the boundaries that are being pushed to develop high speed, low latency message passing between SMP platforms. Indicate specific efforts to minimize software overhead for MPI message passing. Indicate efforts to establish these technological developments as industry standards. Give performance goals (e.g., latency, pipe bandwidth and bi-sectional bandwidths), timeline and specific milestones for inter-SMP networking. Indicate the way this cluster interconnect has sufficiently low latencies and enough bi-section bandwidth to support ASCI relevant applications.

- Cluster I/O and External Network Connections. Describe the technological development plan for cluster I/O and external networking. By external networking, what is meant is the standards-based networking (e.g., HIPPI, ATM and Fibre Channel) to connect the SST Scalable cluster to other networks at LANL and LLNL. Particular attention should be paid to parallel I/O infrastructure and the related API. Connections to efforts such as LLNL's Scalable I/O Facility or CalTech's Scalable I/O initiative should be mentioned. Development aimed at meeting the SST system requirement for separable RED/BLACK I/O subsystems should be specifically addressed. Give performance goals (e.g., single and parallel I/O delivered bandwidth), timeline and specific milestones for I/O and external networking. Indicate why this cluster I/O strategy has sufficient parallel I/O bandwidth to support ASCI relevant applications.

- Scalable Systems Capability. Describe the issues relating to scaling the above technology to delivered TeraFLOP/s computing (and beyond) and the approach to addressing these issues. Particular attention should be paid to reliability, availability and serviceability.

- Other. Indicate any additional development efforts related to this contract that are not covered by the preceding requirements.

(c) Software Technology Roadmap

The Offeror shall present a roadmap for software technology trends that leads to timely completion of the project software related goals. The plan shall include the following elements:

- Operating System Development. Describe the technology trends for SMP operating systems development and industry standardization efforts (e.g., OSF or XOpen). For example, indicate specific development goals for the following (or other) areas: scalable SMP support; distributed shared memory locality of reference; support for hardware and system performance monitoring; low latency user callable thread mechanism; memory management; full 64b support, journaled file systems; reboot time minimization; SMP local gang scheduling; virtual memory support for batch processing; support for RED/BLACK I/O subsystems; DCE standard tracking; group routing and time frames with specific milestones. If the strategy is to leverage another vendor's operating system or do joint development, then also describe the business relationship and the nature and extent of the technical collaboration.

- Single System Image Development. Describe the technology trends for cluster wide single system image development and strategy for leveraging University research and for initiating industry standardization efforts. For example, indicate specific development goals for the following (or other) areas: POSIX compliant cluster wide file system; cluster single IP network address; page leveled shared memory between SMPs; file system failover; cluster wide lock management; cluster wide process and POSIX session ID space; virtual memory DMA between SMPs; load balancing and process and process migration between SMPs; system administration tools for managing the cluster as a single system. If the strategy is to leverage another vendor's clustering environment or do joint development, then also describe the business relationship and the nature and extent of the technical collaboration.

- Parallel I/O Development. Describe the technology trends for cluster wide parallel application I/O development and for initiating industry standardization efforts. Comment on planned development strategy in at least the following (or other) development areas: network connected parallel I/O development; application programming interface; performance.

- Compiler Development. Describe the technology trends for baseline language (Fortran 90, C, C++) and HPF development and industry standardization efforts (e.g., IEEE, ANSI). Indicate specific goals for at least the following development areas: mixed language support; automatic and directed parallelization (decomposition) of applications; latency reduction techniques; compiler optimization; migration support (from ID to SST).

- Message Passing Environment. Give overall strategy for message passing library development and interaction with hardware development efforts. For example, indicate specific goals for the following (or other) development areas: bandwidth and latency targets for MPI; MPI standard tracking; integration with debuggers, profilers and performance analysis tools; interoperability to cluster external resources.

- Code Development Tools. Give overall strategy for code development tools development and interaction with hardware development efforts. For example, indicate specific goals for the following (or other) development areas: parallel make; profilers, debuggers, application performance monitoring tools, GUI development for code development tools.

- Cluster Resource Management Support. Give overall strategy for cluster resource management support development. For example, indicate specific goals for the following (or other) development areas: hooks for external policy modules; system monitoring tools; cluster wide gang scheduling.

- Fault Tolerance and Containment. Describe the technology trends and development for increasing individual SMP and cluster reliability and availability. For example, indicate developmentstrategy in this (or other) area of fault tolerance and gradual degradation of service in the face of component failure features. Indicate specific goals for at least the following development areas: failure tolerance of CPUs, memory components; SMPs, interconnect, I/O subsystems; error detection vs. retry.

- Other. Indicate any additional development efforts related to this contract that are not covered by the preceding requirements.

(d) Technology Refresh

Due to the extended period between the Initial Delivery and SST delivery, it is prudent to consider hardware **and software** technology insertions as they are developed as part of an overall risk reduction strategy. The Offeror shall describe the technology refresh program proposed. Particular attention should be paid to:

- SMP Upgrade: CPU speed, additional CPUs, hierarchical memory component size and speed;

- Upgrading SMP interconnects: link bandwidth, bi-sectional bandwidth, reduced latency, improved remote memory reference time, redundancy and reliability;

- Upgrading parallel I/O: size, serial and parallel I/O bandwidth;

- Adding additional SMPs; and

- Early delivery of SST scalable cluster software capabilities in the areas of: single system image, parallel I/O, parallelizing and optimizing compilers, message passing, code development tools, cluster resource management, fault tolerance and containment.

(e) Application Development Vision

Describe the migration path for applications from the ID to SST platforms. Address specifically how applications can scale to the larger system with minimal shift in the programming model and how applications can be tuned for efficiency while still preserving basic portability to other ASCI platforms. What process is planned for incorporating feedback from the application development experience into Offeror products?

4. Statement of Work Response

Particular paragraphs of the Statement of Work have the following designations and definitions. A list of all (MR) and (MO) requirements is contained in Appendix A of this attachment.

(a) **Mandatory Requirements designated as (MR)**
Mandatory requirements, indicated with the verb "shall," are items that are essential to the University requirements and reflect the minimum qualifications an offeror must meet in order to have their proposal evaluated further for selection (see also Attachment 4, Evaluation Criteria).

(b) **Mandatory Option requirements designated as (MO)**
Mandatory Option requirements deal with features, components, performance characteristics, or upgrades whose availability as an option is deemed a Mandatory Requirement by the University. Hence, a proposal not meeting a Mandatory Option will be deemed technically nonresponsive. Because the University may variously elect to include or exclude such options in resulting orders, each should appear as a separately identifiable item in the Price and Administration Proposal.

(c) **Target Requirements designated as (TR).**
Each paragraph so labeled deals with features, components, performance characteristics or other properties that is considered desirable part of the ASCI system but will not be a determining factor of response compliance. Requirements in the Statement of Work indicated with the verb "may" are targets. Target Requirement responses will be considered as part of the evaluation of Technical Excellence (see Attachment 4, Evaluation Criteria)

The Offeror shall provide a point-by-point sequential response to all (MR), (MO), and (TR) paragraphs in the Statement of Work. The response shall follow the order given in the Statement of Work, using the same numbering scheme. Each individual response should, to the maximum possible extent, stand alone and be as complete as possible, providing clear statements and concise delineation with respect to all aspects of the requirement. Repeating the specification requirement or using such phrases as "standard procedures will be employed" or "well-known techniques will be used" are inadequate and may result in your proposal being deemed nonresponsive and eliminated from further consideration.

5. Applications Development Assistance

The objective of this project is to develop applications in support of our Stockpile Stewardship obligations. We require that the applications development begin at the earliest possible time after delivery and installation of the system. In order to accelerate the pace of development, we require the Offeror to support these efforts by assigning appropriate personnel to assist the University applications developers in the optimum use of the hardware and software and to provide on-site expertise for code development tools and libraries. We further anticipate that, at the same time, our applications developers will provide appropriate feedback to the Offeror with regard to potential improvements that can be made to Offeror's hardware and software. The Offeror shall propose an applications development assistance plan with specific manpower and skills goals.

6. Benchmarks Results

The submission of benchmark results is optional (see Section 5.3 of the Statement of Work). However, if an Offeror chooses to submit benchmark data, the University requests that at least the sPPM benchmark results be provided, as delineated the Statement of Work and associated "readme" files. Any benchmark results provided shall also include a hardcopy companion document with explanations and cross references to the material provided on 8mm tape. It should be noted that benchmark results will be considered as part of the evaluation of Technical Excellence for the Initial Delivery System (see Attachment 4, Evaluation Criteria).

7. Facilities Plan

The Offeror shall provide the estimated total amount of power in kW (kilowatts) required by the complete ID, SST and any proposed intermediate systems based on major technology refresh milestone systems, including any subsystems (e.g., disks, external networking, etc.); the estimated total amount of cooling in BTU (British Thermal Units) required by the complete ID, SST and any proposed intermediate systems based on major technology refresh milestone systems. The Offeror shall list separately room air and any liquid cooling required for each system, in relation to the heat load created by operation of each system.

8. Offeror-Proposed Options

The Offeror is invited to propose, for University consideration, options in addition to those prescribed in this Statement of Work. Such proposals should be limited to options that would

offer clear advantage to the University in the pursuit of the Tera-scale goals of this solicitation. Each such option should appear as a separately identifiable item in the Price Proposal.

C. VOLUME II - PRICE PROPOSAL

1. General

The Price Proposal shall be Volume II of your overall response. The price proposals will be evaluated to determine such matters as the reasonableness of cost, the probable cost to the University, and an understanding of the magnitude of effort. Therefore, proposals should be unambiguous, accurate, current, complete, and well documented.

Volume II shall have, as a minimum, four parts as follows:

- ASCI System Price Schedules
- Milestone Pricing Schedule
- List of Intellectual Property Items Not Being Charged
- Unique or Advantageous Financial Incentives

2. ASCI System Price Schedules

The Offeror shall fully complete the Microsoft Excel 5.0 price schedule spreadsheets, copies of which are contained in Appendix B of this RFP attachment, in accordance with the instructions contained herein. Modifications to the spreadsheets may be made as necessary.

Mandatory Requirements Price Schedule. The line items contained in the Mandatory Requirements Price Schedule are derived from the (MR) and (MO) specifications in the Statement of Work. An entry must be made for each line item. If the price of a mandatory (MR) line item is being offered at "No Charge" to the University insert "N/C" for that entry. If a line item cannot be separately priced, insert "NSP" for that entry. You must also insert the entry "Note n" in the description column (where "n" is an integer) directing the University to the "Note" that provides a narrative explanation for all "NSP" entries, identifying which line item includes that price. All accompanying notes shall be included at the end of the price schedule.

All Mandatory Option (MO) line items shall be separately priced.

Target Requirements Price Schedule. The line items contained in the Target Requirements Price Schedule are derived from the (TR) paragraphs in the Statement of Work. Each line item must be completed with one of the following:

- the price
- "N/C" if the item is being provided at "No Charge" to the University
- "NSP" with corresponding "Note" if the price is included in another line item price
- "N/O" if the item is "Not Offered"

The Offeror may provide additional line items and prices where necessary.

2. Memory Upgrade Pricing

The price provided for the Memory Upgrade mandatory option, identified in specification 6.2.11, shall be a not-to-exceed price. Before exercising this option in the first calendar quarter of 1999, the University will determine whether the not-to-exceed price is the best price available. Should the then current market price of this option be more advantageous, the price of this mandatory option shall be subject to downward negotiation. The Offeror may propose a methodology for repricing this mandatory option.

3. ASCI Blue Funding Profile

The University's best estimate of the ceiling amount for funds to be made available for this ASCI Blue subcontract is $100M. This ceiling includes all MR, MO, and TR requirements for one Initial Delivery System, Technology Refresh one Sustained Stewardship TeraFLOP/s system, Memory Upgrade, Applications Development Assistance, and all other ASCI Blue costs for one subcontract. If a second subcontract is issued as a result of this solicitation, it is anticipated that the funding profile for the second subcontract will be the same as identified below for the single subcontract. It should be noted that, if only one contract is issued and the University elects to exercise the mandatory option for a second Initial Delivery System (specification 6.2.3), the price of that system is considered to be outside of the $100M ceiling. It is expected that funding for ASCI Blue will be appropriated on a Government Fiscal Year basis as follows:

Description	Funding $	Interval
ASCI Blue Funding Envelope	**$100,000,000**	**FY96-FY99**
First Year Funding	$25,000,000	FY96
Second Year Funding	$25,000,000	FY97
Third Year Funding	$25,000,000	FY98
Fourth Year Funding	$25,000,000	FY99

4. Milestone Pricing Schedule

The Offeror shall complete the Microsoft Excel 5.0 Milestone Price Schedule, a copy of which is contained in Appendix C of this RFP attachment. Additional milestones may be added as appropriate. To the maximum extent possible, your proposed Milestone Payment Schedule should correspond to the Laboratory's projected ASCI Blue funding profile.

5. Intellectual Property Not Charged to this Subcontract

The Offeror shall provide a list of all items being developed under any resultant ASCI Blue subcontract for which the University is not being charged. This list shall be as complete as possible, identifying specification numbers where applicable.

6. Financial Incentives

Alternate financial proposals, such as cost share, lease, etc., may be submitted. Provide price details of any alternate financial proposals submitted or any advantageous financial incentive being offered.

D. VOLUME III - ADMINISTRATIVE PROPOSAL

1. General

The Administrative Volume shall consist of administration information required by the University to evaluate your proposal and prepare the final contract document. It shall include the required representations, certifications and endorsements by the offeror; any other administrative information; and exceptions or deviations taken to other parts of this solicitation. This volume shall not be used to present, offer, or otherwise establish a proposal that should be properly presented in Volume I or Volume II. NO PRICE INFORMATION SHALL BE INCLUDED IN VOLUME III.

The format and content of Volume III shall be in the same sequence and follow the paragraph numbering as shown below.

2. The Offer

Complete and submit the form entitled "Offer" contained in Attachment 8 to this solicitation.

3. Representations and Certifications

Submit the fully completed and signed Representations and Certifications contained in RFP Attachment 8.

4. Additional Information

Provide the Small Business and Small Disadvantaged Business Subcontracting Certifications and Plan, Equal Opportunity Compliance Information, Foreign Ownership, Control, or Influence (FOCI) certifications. Include any other statements, representations, and information required by the solicitation or which the Offeror chooses to bring to the attention of the University which are not directly related to Volume I or Volume II.

5. Acceptance of Terms and Conditions

Offeror shall indicate its willingness to accept the terms and conditions of the MODEL SUBCONTRACT, including the GENERAL PROVISIONS. The Offeror may separately list and comment on any of the terms and conditions of the MODEL SUBCONTRACT, but acceptance of the terms and conditions must be unconditional for the proposal to be determined responsive. Many of the University's terms and conditions are required by the Prime Contract with DOE and

their modification would result in significant unacceptable delays in the University's ability to award a subcontract. Accordingly, the University does not intend to make significant or substantial modifications to the terms and conditions.

Exceptions to the Representations and Certifications contained in Attachment 8 of this solicitation are not permitted.

6. Offeror Identification

Provide the following information:

a. The complete formal name and address of your company which would be used in any resultant contract.

b. The name and address of the organizational unit(s) to be responsible for the work proposed.

c. Indicate by name and title the individual(s) in your organization who will be the point of contact during the selection process, responsible for contract negotiations and the administration of any resultant contract.

d. Provide certification of the authority of the person signing the proposal to commit the organization to all of the provisions of the proposal.

7. Proposal Validity

Include a statement that the offer will remain open for acceptance for a period of no less than one hundred eighty (180) calendar days after the proposal due date. A longer period may be specified by the Offeror.

8. Corporate Resources and Capability

This section shall describe your corporate resources and capabilities to provide the required personnel, equipment, and other resources for the period of performance of this contract.

Provide a brief history of your corporate experience in providing equipment, systems, and service relevant to this solicitation. Include the number of years you have engaged in sales, installation, and maintenance of similar systems; the number and sizes of similar installations you have provided in recent years; and the number of installations for which you are currently providing maintenance and other services. Include any other corporate history which is pertinent to the RFP of which you feel the University should be aware.

Provide a list of all contracts terminated (partially or completely) within the past five (5) years. Give the dollar amount of the contract, a brief description of the Statement of Work, the reasons for termination, the sponsoring agency, the contract number, and the name and telephone number of the Contract Administrator or Contracting Officer.

9. Lower-Tier Subcontractor Experience

Describe your experience with all proposed subcontractors and the experience that the proposed lower-tier subcontractors have had on projects for similar equipment or services as ASCI Blue.

10. Software Licensing

Submit licensing policies for all categories of software (compilers, libraries, application development tools, etc.). Identify all third party software. Include policies for cluster-wide right-to-use licenses for an unlimited number of users for all software delivered under this subcontract. Include any required Software License or Maintenance Agreement. Please note the following concepts are expected to be incorporated in any resultant license agreement or maintenance agreement:

a. The governing laws of the state of California or New Mexico

b. The right of assignment of any agreement to the Department of Energy (DOE) for assignment to any succeeding prime contractor to the University. An Offeror's proposal may be considered non-compliant in the event the offeror and the University cannot mutually agree to terms and conditions contained in any software license or maintenance agreement.

11. Financial Condition and Capability

To assist the University in assessing the financial capability of the Offeror, provide the following:

a. Audited balance sheets and profit and loss statements for your company for the last three (3) completed years, including interim statements for the current year. Also provide copies of your Form 10-K filed with the Security Exchange Commission for the past three (3) fiscal years, plus any 10-Q Forms filed since the last Form 10-K.

b. Furnish affirmative assurance, such as endorsements from financial institutions, that your company has sufficient funds necessary to perform the work.

c. State what percentage this proposed contract will represent of your performing organization's estimated total business during the period of performance.

d. State the distribution of your last complete fiscal year's sales volume among commercial business, Government prime contracts, and subcontracts under Government prime contracts.

e. Provide a current Dun and Bradstreet Payment Analysis Report (PAR).

12. Unique or Advantageous Financial Incentives

Describe any advantageous financial incentives being offered to the University that will enhance the financial arrangement between the University and the Offeror. A description of the financial arrangement should be included in Volume III, however, pricing details shall be contained in Volume II.

APPENDIX A
MANDATORY REQUIREMENTS

Section	Mandatory Requirement
1.2.1	Detailed Project Plan (MR)
1.2.2	Execute Development Plan (MR)
1.2.3	Install ID System(s) (MR)
1.2.5	On-site Support (MR)
1.2.6	Scalable Development Environment Goal (MR)
1.2.7	Sustained TeraFLOP Performance Goal (MR)
1.2.8	Three Peak TeraFLOP Performance Goal (MR)
1.2.9	Install Sustained Stewardship (SST) TeraFLOP System (MR)
1.2.10	Memory Upgrade (MO)
1.2.11	Performance Reviews (MR)
1.2.12	Successful Project Completion (MR)
4.1.1.1	Sustained Stewardship TeraFLOP SMP Scalable Cluster (MR)
4.1.1.2	SST Component Scaling (MR)
4.1.1.3	SST Applications Memory (MO)
4.1.2.1	SMP Platform (MR)
4.1.2.2	CPU Characteristics (MR)
4.1.3.1	Shared Main Memory (MR)
4.1.4.1	RED/BLACK Code Development Environments (MO)
4.1.4.2	RED/BLACK I/O Resources (MR)
4.1.4.3	RED/BLACK Migration (MR)
4.1.5.11	Replacement Parts and Maintenance (MR)
4.2.1.1	SMP Base Operating System and License (MR)
4.2.1.3	Networking Protocols (MR)
4.2.1.5	Group Routing (MR)
4.2.2.1	OSF DCE (MR)
4.2.2.1.1	Distributed File System Server (MR)
4.2.2.1.2	Cluster Wide Service Security (MR)
4.2.2.1.3	Transarc Encina (MR)
4.2.3.4	Cluster Wide Job Management (MR)
4.2.3.5	Cluster Wide Job Scheduling (MR)
4.2.4.1	Single Point for Cluster System Administration (MR)
4.2.5.1	Baseline Languages (MR)
4.2.6.1	Debugger for Cluster Wide Applications (MR)
4.2.6.4	Profiling Tools for Cluster Applications (MR)
4.2.6.5	Event Tracing Tools for Cluster Applications (MR)
4.2.6.6	Performance Statistics Tools for Cluster Applications (MR)
4.2.6.8	Cluster Wide Application Development Tool GUI (MR)
4.2.7.1	Linker and Library Building Utility (MR)
4.2.7.2	Make Utility (MR)
4.2.8.1	Optimized Message-Passing Interface (MPI) Library.(MR)
4.2.8.6	Graphical User Interface API (MR)
4.2.9.2	Audit Capability (MR)
4.2.10	Compliance with DOE Security Mandates (MR)
4.2.12	SST Applications Development Support (MR)
5.1.1.1	ID SMP Scalable Cluster (MR)
5.1.2.2	ID SMP Cluster Performance (MR)
5.1.3.1	RED/BLACK Partitions (MR)
5.1.3.1.1	RED/BLACK Resource Split (MO)

APPENDIX A
MANDATORY REQUIREMENTS

5.1.3.1.2	RED/BLACK Partition Switching (MO)
5.1.4.1	Replacement Parts and Maintenance (MR)
5.2.1.1	SMP Base Operating System and License (MR)
5.2.1.2	Networking Protocols (MR)
5.2.1.4	Group Routing (MR)
5.2.2	Distributed Computing Environment (MR)
5.2.2.1	Distributed File System Server (MR)
5.2.2.2	Transarc Encina (MR)
5.2.5.1	Baseline Languages (MR)
5.2.6.1	Debugger for Parallel Applications (MR)
5.2.7.1	Linker and Library Building Utility (MR)
5.2.7.2	Make Utility (MR)
5.2.8.1	Optimized Message-Passing Interface (MPI) Library.(MR)
5.2.8.4	Graphical User Interface API (MR)
5.2.10	Compliance with DOE Security Mandates (MR)
5.2.12	ID Applications Development Support (MR)
5.3.2	System Configuration (MR)
5.3.3	Test Procedures (MR)
6.1.1	Detailed Project Management Plan (MR)
6.1.2	Detailed Hardware Project Plan (MR)
6.1.3	Detailed Software Project Plan (MR)
6.2.1	Detailed Project Plan (MR)
6.2.2	Initial Delivery (ID) System (MR)
6.2.3	Second Initial Delivery (ID) System (MO)
6.2.4	ID Applications Development Support (MR)
6.2.5	FY97 Plan and Review (MR)
6.2.7	FY98 Plan and Review (MR)
6.2.8	SST Applications Development Support (MR)
6.2.11	Scalable Development Environment Demonstration (MR)
6.2.12	Sustained Stewardship TeraFLOP (SST) Demonstration (MR)
6.2.13	SST Installation (MR)
6.2.14	FY99 Plan and Review (MR)
6.2.15	Memory Installation (MO)
6.3	Performance Reviews (MR)
6.4	SST TeraFLOP/s sPPM Demonstration (MR)

ATTACHMENT 3

APPENDIX B

ASCI SYSTEM PRICE SCHEDULES

INSTRUCTIONS FOR COMPLETING ASCI SYSTEM PRICE SCHEDULES

The following three (3) Price Schedules - Mandatory Requirements, Target Requirements, and Summary Pricing Schedule must be completed in accordance with instructions contained in Section C.2 of this Proposal Preparation Instructions document. It is requested that Offerors use the Excel 5.0 document contained in the ASCI Request for Proposal located on the Internet. The Excel worksheets should be completed as follows:

1. Mandatory Requirements Price Schedule. Complete this schedule as specified in Section C.2. This information will be transferred to the "Summary Schedule" automatically.

2. Target Requirements Price Schedule. Complete this schedule as specified in Section C.2. This information will be transferred to the "Summary Schedule" automatically.

3. Summary Price Schedule. This schedule is built from the information input in the Mandatory and Target schedules.

ATTACHMENT 3

APPENDIX C

ASCI SYSTEM MILESTONE SCHEDULE

INSTRUCTIONS FOR COMPLETING ASCI SYSTEM MILESTONE SCHEDULE

The Milestone Pricing Schedule is contained in the Request for Proposal located on the Internet in Excel 5.0 format.

Complete the milestones that are offered as part of this proposal in the Milestone worksheet. Note that line 8 of this schedule corresponds to the Statement of Work, Section 6.2.6 and has additional lines that can be generated and completed by the Offeror as part of the proposed hardware and software technology refresh program. Additional deliverables may be inserted into this schedule by the Offeror.